To: DeYoung, Robyn[DeYoung.Robyn@epa.gov]

Cc: Jeremy Fisher[jfisher@synapse-energy.com]; Chris.Lamie@erg.com[Chris.Lamie@erg.com]; Patrick Luckow[PLuckow@synapse-energy.com]; Sarah Jackson[sjackson@synapse-energy.com]

From: Nidhi R. Santen

Sent: Fri 7/10/2015 3:48:49 PM

Subject: RE: TSD for projecting CO2 performance

State Plans TSD 7 7 15 Synapse.docx

Robyn,

Here is language from the team here for the RPS-related sections of the TSD. We've highlighted the additions in blue.

Please let us know if you have any questions or need anything else.

Best,

Nidhi

Nidhi R Santen, PhD

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From: Patrick Luckow

Sent: Thursday, July 09, 2015 11:05 AM **To:** Nidhi R. Santen; Sarah Jackson

Subject: FW: TSD for projecting CO2 performance

From: DeYoung, Robyn [mailto:DeYoung.Robyn@epa.gov]

Sent: Thursday, July 09, 2015 11:01 AM

To: Patrick Luckow

Cc: Chris Lamie; Jeremy Fisher

Subject: RE: TSD for projecting CO2 performance

Hi Patrick,

Thanks for the help. Answers to your questions are below.

From: Patrick Luckow [mailto:PLuckow@synapse-energy.com]

Sent: Thursday, July 09, 2015 10:57 AM

To: DeYoung, Robyn

Cc: Chris Lamie; Jeremy Fisher

Subject: RE: TSD for projecting CO2 performance

We can put something together – I think it will be quite similar to the EE section, with the addition of the annual performance characteristics. A couple questions:

a) If we're just focused on MWh impacts (and not CO2) the hourly load shape may not be necessary. Is this the case?

YES, we are only focused on MWh impacts. We do not need to talk about emissions impacts. The goal is those impacts would be eventually be used as an input into some type of model/tool, we won't talk about how that next step is done.

b) I don't see any mention of interstate impacts – is the focus here purely on quantifying the amount of energy produced, not the amount of energy displaced? Yes, that is correct. we are purely quantifying energy produced and appropriate ways to do that.

Thanks	,
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Patrick

From: DeYoung, Robyn [mailto:DeYoung.Robyn@epa.gov]

Sent: Thursday, July 09, 2015 10:18 AM

To: Patrick Luckow

Cc: Chris Lamie; Jeremy Fisher

Subject: TSD for projecting CO2 performance

Hi Patrick,

We want to pull together language that describes how one would estimate the RE impacts of a RPS or the installation of 'qualifying RE' projects (e.g., wind or solar). Do you have anything handy or do you know of a good reference where I could describe an appropriate methodology for projecting the energy impacts of these types of instances?

For example, if you have a group of wind projects and you want to know the MWh impacts, would you just need to know the capacity of the project, estimated capacity factor and if it's available the load shape of the RE technology?

Alternatively a model could predict what wind/solar and other resources may come online in the future based on the cost of the different RE technologies.

I need to write something up that describes these possible methods. Is that something you can help me with this week? I'd need something by Friday COB.

Attached is the current draft of the TSD. You can focus on the Section: Applied Considerations for Treatment of Different Types of State Plan Approaches or Measures See the EE/ EERS section. We'd like something comparable for RE.

Feel free to give me a call if you have questions.

Robyn